AR DOC # 050



Proposed Plan

NAVAL STATION NEWPORT Installation Restoration Program June 1999

McAllister Point Landfill Site Middletown, Rhode Island

The Cleanup Proposal...

After careful study of the McAllister Point Landfill Site, the Navy proposes a plan to reduce risk from Narragansett Bay sediments adjacent to the site (Figure 1 on page 2):

NEARSHORE AND ELEVATED-RISK OFFSHORE AREAS

- Dredge and dewater contaminated sediment and debris
- Dispose contaminated sediment and debris under the existing McAllister Point Landfill cap and/or in an off-site facility.
- Cover the dredged area with clean fill and restore altered aquatic habitats.

OFFSHORE AREA

 Conduct long-term monitoring and 5-year reviews.

More on page 3

How would the cleanup affect the local area?

The Navy invites you to attend a public information open house and public hearing on June 24 to find out about the proposed cleanup plan and how it compares with other cleanup options for the site. The Navy will respond to your questions and concerns about the proposed cleanup and how it may affect you. For further information on the open house and hearing, call Melissa Griffin at 401-841-6375.

Public Information: Open House and Hearing 3:00 to 8:000pm Thursday June 24:1999 Joseph H Gaudet Middle School Hais Aquidneck Ave Middletown, Ri

What do you think?

The Navy is accepting public comment on this proposal from June 14 through July 14. You don't have to be a technical expert to comment — if you have a concern or preference, the Navy wants to hear it before making a final decision.

To comment formally:

Offer oral comments during the public information open house and hearing on June 24 (see page 6 for details about providing formal comments).

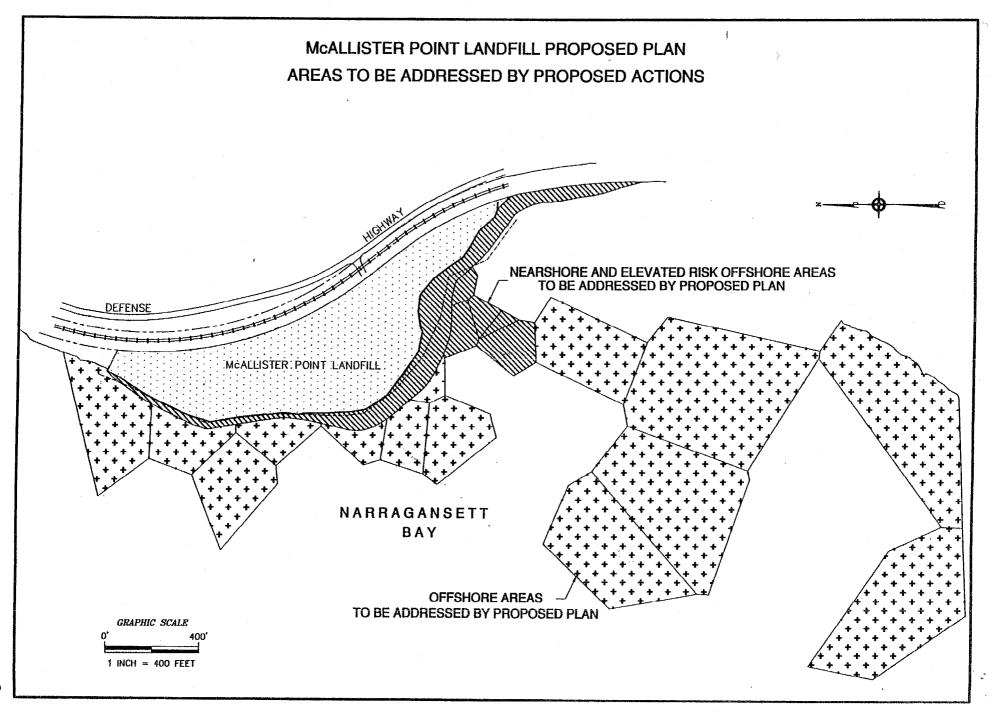
Provide written comments at the open house and hearing, by fax, or by mail postmarked no later than July 14 to:

Melissa Griffin NAVSTA Newport IR Site Manager PWD, Building 1 1 Simonpietri Drive Newport, RI 02841 Fax: (401) 841-7071

E-mail comments by July 14 to: melissa.griffin@smtp cnet.navv.mil

In accordance with the Comprehensive Environmental Response, Compensation and Liability Act, (S ction 117) the law that established the Superfund program, this document summarizes the Navy's cleanup proposal. For detailed information on the options evaluated for use at the site, see the McAllister Point Landfill Feasibility Study available for review at the information repositories at the Portsmouth, Middletown, and Newport Public Libraries.

FIGURE 1



A Closer Look at the Navy's Proposal...

NEARSHORE AND ELEVATED-RISK OFFSHORE AREAS

- Dredge and dewater contaminated sediment and debris. The approximate areas where dredging would occur are shown on Figures 1 and 2. It is estimated that about 34,000 cubic yards of material (enough to cover a football field to a height of about 20 feet) will have to be dredged.
- Perform a pre-design investigation to confirm the extent of contaminated sediment and debris and assess the McAllister Point Landfill as a potential site to dispose of the dredged materials.
- Establish engineering controls to minimize sediment migration during dredging.
- Stabilize the seaward extent of the landfill before dredging.
- Excavate the contaminated sediment and debris from the shallow area south of the landfill using conventional earth-moving equipment.
- Dredge the contaminated sediment and debris from the remainder of the nearshore area using barge-mounted equipment.
- Screen the estimated 34,000 cubic yards of dredged material to separate large stones suitable for reuse and any debris that would be recycled or disposed separately. The separated materials would be handled as follows:
 - approximately 20% of the dredged material (rocks more than 6 inches in diameter) would be decontaminated and reused.
 - a small fraction of the dredged material (up to 500 tons of large debris) would be decontaminated and sent off site for recycling or disposal.
 - the remaining 80% of the dredged material would be dewatered and disposed at the McAllister Point Landfill and/or at an off-site location).

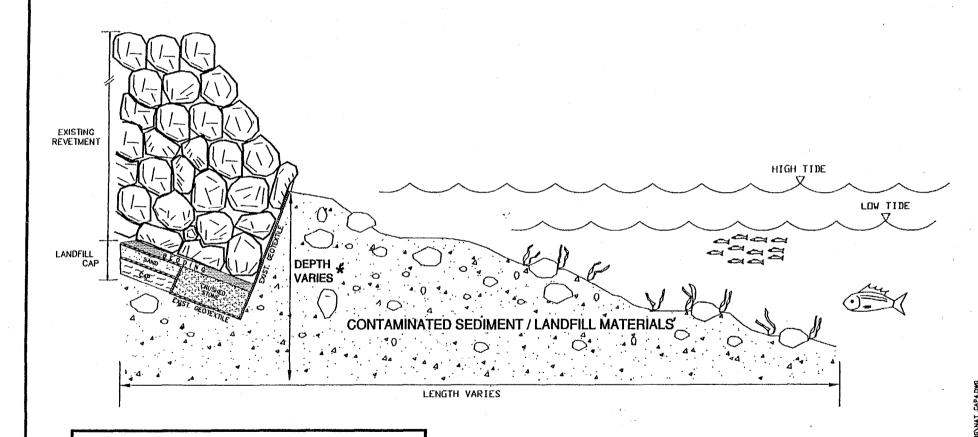
- Dewater the contaminated sediment and debris.
- Treat dewatered fluids as needed and discharge to the bay.
- 2. Dispose the contaminated sediment/debris at McAllister Point Landfill and/or in an approved off-site facility.
- Stage excavated sediment and debris at Pier 1 or another appropriate pier.
- Remove a portion of the existing cap and dispose contaminated sediments and debris in a new disposal cell on top of the existing landfill, until capacity is reached.
- Dispose any remaining sediments and debris at an off-base landfill.
- Cap the expanded section of the landfill to the same standards as the existing cap.
- 3. Backfill the dredged area with clean material.
- Backfill the dredged area to the existing grade with clean sand, gravel, and rock similar to materials in the surrounding area to promote natural restoration of the aquatic community.
- Monitor site restoration and actively restore aquatic habitats that fail to naturally reestablish themselves.

OFFSHORE AREAS

- Conduct long-term monitoring and 5-year reviews.
- Monitor sediment and biota annually.
- If expected contaminant reductions are confirmed after 5 years, reduce monitoring frequency to once every 5 years.
- Review site conditions every 5 years to assess the effectiveness of the alternative.

FIGURE 2

Mcallister Point Landfill Proposed Plan Nearshore area where dredging would occur



THICKNESS OF CONTAMINATED SEDIMENT / LANDFILL MATERIALS VARIES IN DEPTH FROM 0 - 15 FEET ALONG THE EDGE OF REVETMENT

NOT TO SCALE

GROUNDWATER

Quarterly groundwater monitoring has been conducted at the site since the landfill cap was completed in 1996. Based on the data from this monitoring, groundwater at the site does not appear to pose an unacceptable risk to people or the environment. Therefore, no groundwater treatment is recommended at this time. However, the Navy plans to continue the quarterly groundwater monitoring to assess any changes in contaminant concentrations and evaluate the need for future actions.

LANDFILL GAS

Based on the landfill gas data collected in July 1997, landfill gas emissions do not appear to pose an unacceptable risk to people or the environment. Therefore, no landfill gas collection or treatment is recommended at this time. However, the Navy plans to perform additional air sampling to confirm that landfill gas emissions meet state air quality standards and evaluate the need for active gas collection and treatment.

Site History

The McAllister Point Landfill Site, used as a landfill by the Navy from 1955 to the mid 1970's, is located on 11.5 acres along the west coast of Aquidneck Island between Defense Highway and Narragansett Bay.

1955: Landfilling operations initiated at the site. Site received all waste generated at the Naval complex including waste from operation areas, (machine shops, electroplating operations, etc.), Navy housing units, and ships home ported at the base. Materials disposed of at the site included domestic waste, spent acid, solvents, and waste oils including PCB contaminated oils.

Site History (cont'd)

Late 1950's – early 1960's: An incinerator was built to reduce material volume before it was landfilled.

mid-1970's: Site operations ceased. A 3-foot thick soil cover was placed at landfill closure.

1989: NAVSTA Newport sites were added to EPA's National Priorities List.

1992: A federal Facilities Agreement, signed by the Navy, EPA, and RIDEM, identified responsibilities for cleanup activities and a schedule by which to implement them.

1993: A record of decision (ROD) selected a multi-media, low permeability cap as a source control measure. The ROD required studies to evaluate landfill gas, leachate, groundwater contamination, and contaminated sediments.

1994: The Navy began work on an ecological risk assessment to determine risks to the off-shore environment from landfill chemical releases.

1995-1996: Cap constructed. Interim long-term monitoring program began. Over the winter, erosion at the toe of the cap revetment revealed landfill material seaward of the new cap and significant sand (sediment) erosion in the intertidal zone.

1996: Established a citizens advisory committee called a Restoration Advisory Board (RAB) to assist the Navy in addressing the IR program sites.

1997: Additional studies determined that landfill material is present up to 15-feet thick at the revetment toe and contaminated sediment extends more than 100 feet into the bay in some locations.

1998: A feasibility study was developed to evaluate remedial actions for the contaminated sediments seaward of the landfill revetment, and determine whether remedial actions were needed for landfill gas or site groundwater.

Why is Cleanup Needed?

A human health risk assessment and a marine ecological risk assessment were conducted for the nearshore and off-shore areas. The goal was to determine whether people, aquatic life, or shore birds could be harmed by exposure to the sediment or by eating shellfish from the area contaminated by the landfill. The human health risk assessment concluded that frequent or long-term consumption of mussels and clams taken from the nearshore areas off McAllister Point Landfill presents a potential risk to people who eat those shellfish.

The ecological risk assessment identified increased probability of risk to aquatic life and shore birds exposed to landfill-related contaminants in the sediment and the tissue of prey species. Contaminants of greatest concern are polyaromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), and a few metals.

The identified risks that trigger the need for remediation of the site are:

Nearshore and Elevated-Risk Offshore:

- An unacceptable risk was identified for people who regularly eat shellfish harvested from these areas. It should be noted that this area of Narragansett Bay is currently closed to shellfishing due to sewage discharges in the area. However, the ban may be lifted in the future if the sewage problems are addressed.
- Intermediate and high probabilities of risk were identified for aquatic organisms and shore birds exposed directly to landfill-related contaminants in sediment and indirectly through the food chain by ingestion of contaminated prey species.

Offshore:

- No risk to people or shore birds was identified.
- Low and intermediate probabilities of risk were identified for aquatic (or marine) organisms exposed directly to landfill-related contaminants in sediment or indirectly through the food chain by ingestion of contaminated prey species.

What's a Formal Comment?



The Navy will accept formal written comments during the 30-day formal comment period. The Navy will use the public comments to improve the cleanup proposal.

To make a formal comment you need only to speak to the person recording formal comments at the public information open house and hearing on June 24 or submit a written comment during the comment period.

Federal regulations require the Navy to distinguish between "formal" and "informal comments. While the Navy uses your comments throughout the site investigation and cleanup, the Navy is required to respond to formal comments in writing only. The Navy will not respond to your formal comments during the open house and hearing.

The fact that the Navy responds to formal comments in writing only does not mean that we cannot answer questions. People will be available throughout the open house to discuss any questions or informal comments you have about the site and cleanup proposal.

The Navy will review the transcript of all formal comments received at the open house and hearing, and all written comments received during the public comment period, before making a final cleanup decision. The Navy will then prepare a written response to the formal written and oral comments received.

Your formal comment will become part of the official public record. The transcript of comments and the Navy's written responses will be issued in a document called a Responsiveness Summary when the Navy releases the final cleanup decision.



The Nine Criteria For Choosing a Cleanup

The Navy uses nine criteria to balance the pros and cons of cleanup alternatives. Evaluation of these criteria is required by CERCLA, the law that established the Superfund program. We have already evaluated how well each of the cleanup alternatives developed for the areas off of McAllister Point Landfill meets the first seven criteria (See tables on pages 9 and 10). Once comments from the EPA, the state, the Restoration Advisory Board, and the community are received, the Navy will consider the last two criteria and select the cleanup plan.

- Overall protection of human health and the environment: Will it protect you and the plant and animal life on and near the site? The Navy will not choose a plan that does not meet this basic criterion.
- Compliance with Applicable or Relevant and Appropriate Requirements (ARARs): Does the alternative meet all federal and state environmental and state facility siting statutes, regulations, and requirements? The Navy will not choose a plan that does not meet this basic criterion unless a waiver is granted.
- 3. Long-term effectiveness and permanence: Will the effects of the cleanup plan last or could contamination cause future risk?
- 4. Reduction of toxicity, mobility or volume through treatment: Does the alternative reduce the harmful effects of the contaminants, the spread of contaminants, and the amount of contaminated material through treatment?
- 5. **Short-term effectiveness:** Could the cleanup cause short-term hazards to workers, residents, or the environment?
- 6. **Implementability:** Is the alternative technically feasible? Are the right goods and services and space at an approved disposal facility available?
- 7. **Cost:** What is the total cost of an alternative over time? The Navy must find a plan that gives necessary protection for a reasonable cost.
- 8. **State acceptance:** Does the Rhode Island Department of Environmental Management agree with the Navy's proposal?
- 9. **Community acceptance:** What objections, suggestions or modifications does the public offer during the comment period?

Four Kinds of Cleanup

The Navy looks at numerous technical approaches to determine the best way to reduce the risks presented by a Superfund site. We then narrow the possibilities to approaches that would protect human health and the environment. Although reducing risks often involves combinations of highly technical processes, there are really only four basic options.

1. Take limited or no action:

Leave the site as it is, or just restrict access and monitor it.

2. Contain contamination:

Leave contamination where it is and cover or contain it in some way to prevent exposure to, or spread of, contaminants. This method reduces risks from exposure to contamination, but does not destroy or reduce it.

3. Remove Contaminants:

Remove contaminated material (soil, groundwater, etc.) and dispose of it or treat it elsewhere.

4. Treat contamination on site:

Use a chemical or physical process on the site to destroy or remove the contaminants. Treated material can be left on site. Contaminants captured by the treatment process are disposed in an approved disposal facility.

What are the Cleanup Objectives and Levels?

Nearshore and Elevated-Risk Offshore Area

Investigations at the site concluded that the marine sediment in the area contains landfill-related contaminants that pose potential risks to people, marine organisms, and shore birds. In the nearshore area, these sediments are intermixed with landfill materials including wire, metal, concrete, glass, and ash.

The Navy identified four cleanup objectives to address the identified risks:

- Prevent human consumption of shellfish from areas with contaminated sediment exceeding recommended cleanup levels.
- Prevent contact between marine organisms and contaminated sediment exceeding recommended cleanup levels.
- Prevent shore birds from eating shellfish from areas with contaminated sediment exceeding recommended cleanup levels.
- Minimize migration of contaminated sediment exceeding recommended cleanup levels to offshore areas and unaffected areas of Narragansett Bay.

Offshore Area

Studies concluded that contaminated sediments in the offshore area pose a low to intermediate probability of risk to marine organisms. No risks to humans or shore birds were identified.

The Navy identified two cleanup objectives to address the identified risks:

- Prevent contact between marine organisms and contaminated sediment exceeding recommended cleanup levels.
- Minimize migration of contaminated sediment exceeding recommended cleanup levels to unaffected areas of Narragansett Bay.

TABLE 1
RECOMMENDED SEDIMENT CLEANUP LEVELS

Contaminant of Concern	Recommended Cleanup Levels (units)
Copper	52.9 (ppb in porewater)
Nickel	33.7 (ppb in porewater)
Anthracene	513 (ppb in sediment)
Fluorene	203 (ppb in sediment)
Pyrene	2,992 (ppb in sediment)
Total PCBs	3,634 (ppb in sediment)

Cleanup Alternatives for the McAllister Point Landfill

The McAllister Point Landfill Feasibility Study report reviews the options the Navy considered for cleanup. The options, referred to as "cleanup alternatives," are different combinations of ways to restrict access to, contain, move, or treat contamination to protect public health and the environment.

The Navy developed separate sets of options to deal with nearshore and elevated-risk offshore areas, and the remaining offshore areas.

During the upcoming comment period, the Navy welcomes your comments on the proposed cleanup plan as well as the other approaches we evaluated. These alternatives are summarized below. Please consult the McAllister Point Landfill Marine Sediment/ Management of Migration Feasibility Study available at the Newport, Portsmouth, and Middletown public libraries for more detailed information.

Near Shore and Elevated-Risk Offshore Area Cleanup Alternatives

Limited or No Action

Alternative NS/ER-1: No Action

- Leave the site as it is.
- Conduct 5-year reviews.

Alternative NS/ER-2: Limited Action

- Construct shoreline fencing, signs, and a buoy system to discourage access and shellfishing.
- Implement long-term monitoring.
- Conduct 5-year reviews.

Contain Contaminants

Alternative NS/ER-3: Capping

- Remove exposed debris from surface.
- Install a multi-media cap in high energy areas and a natural cap in low energy areas within the intertidal and subtidal zones.
- Implement long-term maintenance and monitoring.
- Conduct 5-year reviews.
- Mitigate for permanent loss of aquatic habitat by restoring or creating new aquatic habitat from uplands off site.

Alternative NS/ER-4: Capping with Dredging to Match Existing Grade

- Dredge some of the sediments and debris (2 to 3 feet) and install multi-media and natural caps so the capped grade matches the present grade.
- Dispose of the sediments and debris under the existing McAllister Point Landfill cap or in an approved off-site facility.
- Implement long-term operations and maintenance, and monitoring of habitat restoration and cap integrity.
- Conduct 5-year reviews.

Remove Contaminants

Alternative NS/ER-5: Dredge and Dispose

- Stabilize the revetment as needed to allow dredging of adjacent intertidal zone.
- Dredge and dewater contaminated sediment and debris.
- Dispose the contaminated sediment and debris under the existing McAllister
 Point Landfill cap and/or in an approved off-site facility.
- Backfill the dredged area with clean fill (sand, gravel, rock) similar to the native material to return the area to its present grade.
- Monitor site restoration and actively restore aquatic habitats that fail to naturally re-establish themselves.

Alternative NS/ER 5 is the Navy's preferred alternative.

TABLE 2
COMPARISON OF NEARSHORE AND ELEVATED-RISK OFFSHORE AREA ALTERNATIVES

The Nine Criteria for Selecting a Cleanup Remedy	Alt. NS/ER-1 No Action	Al. NS/ER-2 Limited Action	Alt. NS/ER-3 Capping	Alt. NS/ER-4 Capping with Dredging to Match Existing Grade	Alt. NS/ER-5 Dredge and Dispose ¹
1 - Protects human health and the environment	NO	NO	POTENTIALLY	POTENTIALLY	YES
2 - Meets federal and state standards	NO	NO	NO	POTENTIALLY	YES
3 - Provides long-term effectiveness and permanence	NO	NO	POTENTIALLY	POTENTIALLY	YES
4 - Reduces mobility, toxicity, and volume through treatment	NO	NO	NO	NO	NO
5 - Provides protection from short-term impacts	NA	YES	PARTIALLY	PARTIALLY	PARTIALLY
6 - Implementable (can it be done?)	YES	YES	POTENTIALLY	POTENTIALLY	YES
7 - Cost	\$46,000	\$656,000	\$12,933,000	\$18,129,000	\$22,619,000
8 - RIDEM acceptance	To be determined after the public comment period				
9 - Community acceptance	To be determined after the public comment period				
Time to achieve cleanup goal	Not Achieved	Not Achieved	10 Months	20 Months	23 Months

YES = Meets criterion; NO = Does not meet criterion; PARTIALLY = Partially meets criterion; POTENTIALLY = May meet criterion; NA = Not applicable

¹ This is the preferred remedy for the nearshore and elevated-risk offshore areas.

Offshore Areas Cleanup Alternatives

Limited or No Action

Alternative OS-1: No action

- Leave the site as it is.
- Conduct 5-year reviews.

Alternative OS-2: Limited action

- Leave the site as it is.
- Conduct long-term monitoring to assess status and changes to ensure that biota remain unharmed.
- Conduct 5-year reviews.

Alternative OS-2 is the Navy's preferred alternative.

Contain Contaminants

Alternative OS-3: Capping

- Install a 40.9 acre natural cap.
- Perform long-term operations and maintenance, and monitoring of habitat restoration and cap integrity.
- Conduct 5-year reviews.

Remove Contaminants

Alternative OS-4: Dredge and Dispose

- Dredge and dewater contaminated sediment.
- Dispose the contaminated sediment in an approved off-site facility.
- Monitor during year 1, 2, and 5 and actively restore aquatic habitats that fail to naturally re-establish themselves.
- Conduct one 5-year review.

TABLE 3 COMPARISON OF OFFSHORE AREA ALTERNATIVES

The Nine Criteria for Selecting a Cleanup Remedy	Alt. OS-1 No Action	Alt. OS-2 Limited Action ¹	Alt. OS-3 Capping	Alt. OS-4 Dredge and Dispose
1 - Protects human health and the environment	NO	YES	YES	YES
2 - Meets federal and state standards	POTENTIALLY	YES	YES	YES
3 - Provides long-term effectiveness and permanence	NO	YES	YES	YES
4 - Reduces mobility, toxicity, and volume through treatment	NO.	NO	NO	NO
5 - Provides protection from short-term impacts	NA	YES	PARTIALLY	PARTIALLY
6 - Implementable (can it be done?)	YES	YES	POTENTIALLY	YES
7 - Cost	\$46,000	\$657,000	\$20,904,000	\$44,043,000
8 - RIDEM acceptance	To be determined after the public comment period.			
9 - Community acceptance	To be determined after the public comment period.			

YES = Meets criterion; NO = Does not meet criterion; PARTIALLY = Partially meets criterion; POTENTIALLY = May meet criterion; NA = Not applicable.

¹ This is the preferred remedy for the offshore areas.

For More Detailed Information

This publication summarizes a number of reports and studies to help the public understand and comment on the proposal for the site. All of the technical and public information publications prepared to date for the site are available for review at the NAVSTA Newport information repositories:

Middletown Public Library W. Main Road Middletown, RI 401-846-1573 Hrs. M-F 10 – 8; F-S 10 - 5

Newport Public Library 300 Spring Street Newport, RI 401-847-8720 Hrs. M 12:30 – 9 T-Th 9:30 – 9 F-Sa 9:30 – 6 S 1 – 5 Portsmouth Public Library 2658 E. Main Road Portsmouth, RI 401-683-9457 Hrs. M-Th 9 – 8 F-S 9 – 5

Additionally, information can be obtained by contacting the Navy, EPA, or RIDEM at:

Jim Shafer Remedial Project Manager Northern Division, Naval Facilities Engineering Command 10 Industrial Highway, Mail Stop 82 Lester, PA 19113 (610) 595-0567 ext. 241

Kymberlee Keckler Remedial Project Manager Federal Facilities, Superfund Section U.S. Environmental Protection Agency (HBT) One Congress Street – Suite 1100 Boston, MA 02114-2023 (617) 918-1385 or (888) 372-7341 Paul Kulpa
Remedial Project Manager
Office of Waste Management
R.I. Department of Environmental Management
235 Promenade Street
Providence, RI 02908-5767
(401) 222-2297 ext. 7111

The public is invited to attend the Restoration Advisory Board (RAB) meetings held on the third Wednesday of each month at 7:00 p.m. in the Naval Station Newport Officer's Club.

Why Does the Navy Recommend this Proposed Plan?

The Navy recommends a cleanup plan that uses dredging to address contaminated sediment in the nearshore and elevated-risk offshore areas, and monitoring in the offshore areas because these approaches:

- Best meet CERCLA criteria, pending receipt of state and community comments.
- Address the highest risk areas in the nearshore and elevated-risk off shore areas by removing contaminated sediment from the marine environment and disposing it in a secure landfill, thereby ensuring long-term protection of human health and the environment.
- Address lower risk in offshore areas by longterm monitoring, which would provide adequate protection and would pose significantly lower short and long-term impacts to the environment and aquatic habitats than capping or dredging.

The Navy expects to have reviewed all comments and signed the Record of Decision (ROD) describing the chosen cleanup plan in the winter of 2000. The ROD and a summary of responses to public comments will then be made available to the public information repositories Portsmouth, Middletown, and Newport public libraries. The Navy will announce the decision through the local news media, the RAB, and a community mailing list.

What impacts would the cleanup have on the local community and the environment?

- Suspension of sediments during dredging would pose short-term impacts to aquatic life in the areas.
- The aquatic community in the dredged area would be temporarily destroyed by the action. The community
 would be restored by natural processes within 2 to 3 years.
- Construction activities and transport of contaminated sediment between the Coddington Cove pier area and the McAllister Point Landfill or to an off-site disposal facility over a 2-year period may cause some inconvenience by disrupting local traffic.



THIS PAGE LEFT BLANK INTENTIONALLY

Use This Space to Write Your Comments

Or to be added to the mailing list

The Navy wants your written comments on the options under consideration for reducing risk from sediments in Narragansett Bay that have been contaminated by chemicals from the McAllister Point Landfill. You can use the form below to send or fax written comments. If you have questions about how to comment, please call Melissa Griffin at 401-841-6375. This form is provided for your convenience. Please mail this form or additional sheets of written comments, postmarked no later than date, year to:

Melissa Griffin
NAVSTA Newport IR Site Manager
PWD, Building 1
1 Simonpietri Drive
Newport, RI 02841

Fax: (401) 841-7071 Or E-mail to Melissa Griffin at melissa.griffin@smtp.cnet.navy.mil (Use reverse side and attach sheets as needed) Comments Submitted by: _____ MAILING LIST ADDITIONS, DELETIONS OR CHANGES If you did not receive this through the mail and would like to ☐ be added to the site mailing list Name: □ note a change of address Address: ☐ be deleted from the mailing list please check the appropriate box and fill in the correct address information above.

·	
•	
	 · ·

Public Comment Sheet (cont....)

Place Stamp Here

Melissa Griffin NAVSTA Newport IR Site Manager PWD, Building 1 1 Simonpietri Drive Newport, RI 02841